

RAPID POWER PRODUCING SYSTEM AND METHOD FOR STEAM TURBINE

ABSTRACT OF THE DISCLOSURE

A method to rapidly change a power output level of a steam turbine including the steps of : operating the steam turbine at a continuous power output level including regulating a steam temperature to a constant steam temperature set point; receiving a demand for a rapid change in the power output level of the steam turbine; adjusting the steam temperature set point to a temporary temperature excursion limit selected to achieve the demand for the rapid power change; regulating the steam temperature in the turbine to the temporary temperature excursion limit; operating the turbine at a temporary power output level achieved using the temporary excursion limit; generating power by the turbine using steam regulated to the temporary temperature limit, and changing the temperature used to regulate the turbine after a predetermined period.